## Effects of LSVT® LOUD (Lee Silverman Voice Treatment) on speech intelligibility in children with Cerebral Palsy C. Boliek, V. Chan, D. Kaytor, C. Chin, and C. Fox

Purpose: The purpose of this study was to examine the effects of an intensive voice treatment (LSVT® LOUD) on the speech intelligibility of children with cerebral palsy (CP) Method: Naïve listeners were recruited to decode the pre- and post-treatment recorded single-word speech tokens of nine children with CP in an open-set identification task. A total of 10 speakers responded to the speech token set of each child. The responses were coded for accuracy in whole word intelligibility, percentage of consonants correct, initial consonants correct, final consonants correct, and vowels correct. Paired t-tests were performed for each measure on the pre-, post-, and follow up treatment tokens. The results were compared to available pre-, post-, and follow up treatment acoustic data (dB SPL and maximum phonation duration). Parent interview data and pre- and post-treatment rating scales also were analyzed and compared to the results from listener responses. *Results:* Overall, the listeners were more accurate in decoding the post-treatment speech tokens than the pre-treatment tokens. Parents also perceived improvements in the speech of the children post-LSVT. Conclusions: Improvements in respiratory support and laryngeal control resulting from LSVT have potential spreading effects to the articulatory system that may serve to enhance intelligibility in children with CP.